

Radiation

Safety

Committee

Minutes of Radiation Safety Sub-Committee of November 8, 2000

Having a Substitute Critical Device for the RHIC X & Y Power Supplies

Present: D. Beavis, N. Williams, R. Hyder, J. Reich, W. Mackay, P. Ingrassia, A. Etkin, W. Glenn

Motivation: There has been concern about the PASS interlocks turning the X and Y arcs off while they are under full power. This can shorten the lifetime of the equipment. In addition, interlocking these magnets may have caused some operational difficulties last year.

The Sub-committee approved allowing the AGS injection off to replace the arc power supplies as a critical device.

The requirements and details are discussed below:

The X and Y injection arcs can be replaced by the AGS injection off logic. There will exist key switches in MCR, which will enable the substitution of the AGS injection for the X and Y arcs. The key switches will swap the inputs and outputs to the pass system so that no software changes are required in the field PLCs. The position of the key switches will need to be read and used to provide MCR with the correct active critical devices for RHIC. This will require software changes in panelviews and peer 21, which have less stringent verification requirements than the field PLCs.

The state tables will require updating. **(Ck-fy2001-RHIC-169)**

The PLC and panel view software requires updating. **(ck-fy2001-rhic-170)**

Operation of the key switches should be covered by procedure. **(ck-fy2001-rhic-171)**

Review of the wiring for these changes **(CK-fy-2001-172)**

This system will operate similar to the SEB area. An interlock would stop AGS injection. The operators could slowly ramp down the X and Y arc power supplies and then use the key switches to have the arcs act as the critical devices for RHIC. The AGS could then be turned on for other programs, which are active. With increased experience it is expected that the AtR transport will be turned off or at idle during RHIC stores. In this case the critical device for RHIC could be the ARCs. The new system will allow for flexibility while experience is gained in operating the injection systems and should help protect the equipment.

There was discussion on whether to provide a similar device substitution for the switching magnet. The discussion/decision was deferred pending additional information regarding the switching magnet.

attachments:

Comments on the ATR power supplies by D. Bruno